

### **REMARKS**

Entry of this Amendment in accordance with the provisions of 37 CFR §1.116 is respectfully requested.

This Amendment is in response to the Final Office Action dated February 1, 2007. Following the Office Action, applicants have filed a Notice of Appeal, together with a Petition for Extension of Time, on July 2, 2007. In the meantime, the present Amendment is being filed with the intention of avoiding the need for proceeding with the Appeal by clarifying a distinguishing feature of the invention and adding this feature, found in some of the independent claims, into all of the independent claims.

More specifically, referring to Fig. 2, a feature of the present invention is shown in which a shift register 13 is located between a digital functional unit such as the display controller 11 and the display data RAM 12 and an analog functional unit including the tone voltage selector 15. An important feature of the present invention is that a Data Out terminal is coupled to the Serial Out of the shift register, at the last stage of the digital functional unit, to permit testing of the digital functional unit without passing through the analog function unit. This is extremely important inasmuch as, in the prior art, testing of the digital unit has only been available through the analog unit, which substantially slows down the time required for testing.

Reconsideration and allowance of the independent claims 1, 2, 7, 8, 9, 14 and 16 over the cited prior art to Seichi in view of Lee and/or Sakaguchi, whether considered alone or in combination with one another, is respectfully requested. As noted above, by the present amendment, each of the independent claims has been amended either to further clarify the above-noted feature of the first terminal coupled with to a shift register to permit testing of the digital functional unit without passing

through the analog functional unit, or to add this feature to those independent claims which previously did not include it. With regard to the independent claims that did include this feature, such as claim 1, an amendment has been made to define that the first terminal is coupled to the shift register at the last stage of the digital function unit, as shown in Fig. 2, to further emphasize the benefit of the present invention in being able to test the digital functional unit the last stage thereof without having to pass the test results through the analog functional unit. Other claims, such as claim 2, have been amended to include the feature of this first terminal coupled to the shift register at the last stage of the digital functional unit to permit the testing of the digital functional unit externally independently of the analog functional unit. Thus, each independent claim now clearly defines this feature.

It is respectfully submitted that none of the cited prior art teaches or suggests this feature, whether considered alone or in combination. In particular, the primary reference to Seiichi teaches digital functional units and analog function units separate from one another, but takes out operation results from an input/output buffer 16 coupled to a I/O buffer, not from the shift register 21. Therefore, contrary to the statement made on page 3, lines 3-7 of the Office Action, there is absolutely no suggestion whatsoever of providing a first terminal coupled to the shift register 21 of Seiichi, at a last stage of the digital functional unit, to permit outputting a test result of the digital functional unit without passing through the analog functional unit (or to permit separate testing of the digital functional unit independently of the analog functional unit). Further, nothing in the secondary references to Lee or Sakaguchi at all suggest anything to modify the Seiichi

reference to arrive at the claimed structure. Therefore, reconsideration and allowance of the amended claims is respectfully requested.

Entry of this Amendment is respectfully requested, notwithstanding the finality of the Office Action. Although the present Amendment slightly further clarifies claims such as independent claim 1, the feature in question, namely the first terminal coupled to the shift register to permit outputting a test result without passing through the analog functional unit, has been in the claims as they were examined before the final Office Action. As such, it is respectfully submitted that the slight clarification of those independent claims already having this feature, and the addition of this feature to those independent claims which previously did not, should not require any further search or substantial consideration on the part of the Examiner. Further, entry of this Amendment should either place the application in condition for allowance based upon the comments made above or, at a minimum, reduce the issues for appeal by providing a common feature to consider in each of the independent claims. Therefore, entry of this amendment either for purposes of placing the application in condition for allowance or, at a minimum, in better form for appeal is respectfully requested.

If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.


To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of

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this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 500.43281X00), and please credit any excess fees to such deposit account.

Respectfully submitted,  
**ANTONELLI, TERRY, STOUT & KRAUS, LLP**

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